DOCUMENT RESUME

ED 331 929 UD 028 030

AUTHOR Chunn, Eva Wells; And Others
INSTITUTION District of Columbia Public Schools, Washington, D.C. Dept. of Research and Evaluation.
PUB DATE Feb 91
NOTE 23p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Achievement Gains; *Basic Skills; Elementary Secondary Education; *Instructional Materials; *Low Achievement; Pretests Posttests; Program Evaluation; *Remedial Programs; Urban Schools
IDENTIFIERS *Comprehensive Tests of Basic Skills; *District of Columbia; District of Columbia Public Schools

ABSTRACT

This evaluation of the 1989-90 Cumulative Deficits in Basic Skills Program (CDBSP) in Washington (District of Columbia) public schools uses achievement gains on the Comprehensive Test of Basic Skills (CTBS) and teacher use of specially developed instructional materials to assess program effectiveness. Information was gathered from an analysis of pretest-posttest scores on the CTBS of students in grades 3, 6, 8, 9, and 10 in 25 low-achieving elementary, junior high, and senior high schools. The following findings are presented: (1) students in grade 10 benefited most from the program, as indicated by overall gains in achievement; (2) students in grades 6, 8, and 9 did not benefit from the program, as indicated by overall declines in achievement; (3) the achievement of students in grade 3 did not change significantly; and (4) an analysis of the use of the specially designed instructional materials indicates that "Scoring High on the CTBS," when used by teachers in grade 10, was the most effective. Recommendations emphasize guidelines for the use of the specially designed instructional materials. Statistical data are presented in nine tables. (FMW)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED331929

# EVALUATION OF THE CUMULATIVE DEFICITS IN BASIC SKILLS PROGRAM: THE FIRST YEAR,SY, 1989-1990

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Zollie Stevenson
D.C. Public Schools

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Dr. William Brown
Superintendent of Schools (Interim)
Chief State School Officer

FEBRUARY 1991

BEST COPY AVAILABLE

UD 028 030

District of Columbia Public Schools

# EVALUATION OF THE CUMULATIVE DEFICITS IN BASIC SKILLS PROGRAM: THE FIRST YEAR,SY, 1989-1990


Office of Educational Accountability and Planning

Gilbert L. Hoffman

Director (Acting)

Research and Evaluation Branch

Zollie Stevenson, Jr.

Director

Prepared By:

Eva Wells Chunn

Contributors:

Corene Canon

Scott Dantley

Virginia Griffin

TABLE OF CONTENTS


| | PAGE |
|---|---|
| List of Tables | IV |
| Executive Summary | V |
| Introduction | 1 |
| Description of the Cumulative Deficits in Basic Skills Program | 1 |
| Statement of the Problem | 1 |
| Evaluation Questions | 2 |
| Methodology | 2 |
| Data Analysis | 3 |
| Findings | 4 |
| Comprehensive Test of Basic Skills Performance | 4 |
| Usefulness of Specially Developed and Purchased Instructional Materials | 9 |
| Conclusion | 15 |
| Recommendations | 16 |

## LIST OF TABLES


| Number | Table | Page |
|---|---|---|
| 1 | Schools Participating in the Cumulative Deficits in Basic Skills Program..... | 3 |
| 2 | Grade 3 Performance on the CTBS for Students Matched on the Pre- and Post-Tests.. | 5 |
| 3 | Grade 6 Performance on the CTBS for Students Matched on the Pre- and Post-Tests..... | 6 |
| 4 | Grade 8 Performance on CTBS for Students Matched on Pre- and Post-Tests..... | 7 |
| 5 | Grade 9 Performance on the CTBS for Students Matched on Pre- and Post-Tests..... | 8 |
| 6 | Grade 10 Performance on the CTBS for Students Matched on Pre- and Post-Tests..... .... | 9 |
| 7 | Number and Percentage of Elementary Teachers Who Reported Using the Specially Developed Instructional Materials Daily, Weekly, and Never..... | 10 |
| 8 | Number and Percentage of Junior High School Teachers Who Reported Using the Specially Developed Instructional Materials Daily, Weekly, Bi-Weekly and Never..... | 12 |
| 9 | Number and Percentage of Senior High School Teachers Who Reported Using the Specially Developed Instructional Materials Daily, Weekly, Bi-Weekly and Never..... | 14 |

## EXECUTIVE SUMMARY

To determine the impact of the Cumulative Deficits in Basic Skills Program (CDBSP) on student achievement, CTBS gains were analyzed from pretest (May 1989) to posttest (May 1990) for grades 3, 6, 8, 9, and 10 in 25 low achieving elementary, junior high and senior high schools. Students were tested in six areas--Reading Vocabulary, Reading Comprehension, Reading Total, Math Computation, Math Concept/Application and Math Total. Information on specially developed and purchased Instructional Materials usefulness was collected from teachers. The Evaluation Questions, Findings and Recommendations are summarized below.

- **I. Did significant Comprehensive Test of Basic Skills (CTBS) Normal Curve Equivalent (NCE) reading and mathematics gains occur from pretest (May 1989) to posttest (May 1990) for students participating in the Cumulative Deficits in Basic Skills Program?**

Results from the CTBS indicated that tenth grade students of this sample benefited most from the Cumulative Deficits in Basic Skills Program (CDBSP). Grade 10 students had significant performance gains in 4 of 6 areas, specifically, Reading Vocabulary, Reading Comprehension, Reading Total, and Mathematics Computation. Thus, the program was most effective with the 10th grade.

The CDBSP was not effective with 9th grade, 8th grade and 6th grade students matched in this sample. Ninth grade students had significant performance declines in all six areas. Sixth and eighth grade students had significant performance declines in 4 out of 6 areas. Areas of performance decline for 6th grade and 8th grade, respectively, were as follows:

- Sixth--Reading Vocabulary, Reading Total, Math Computation, Math Total; and

- Eighth--Reading Comprehension, Reading Total, Math Computation, Math Concept/Application.

Significant gains for grades 6 and 8, respectively, occurred in only one area Math Concept/Application and Reading Vocabulary.

Grade 3 performance did not change significantly in 5 areas out of 6. Significant performance gains occurred in one area Math Computation.

- **II. Did the 25 low achieving schools find the specially developed instructional materials useful?**

Instructional materials by grade level that were most useful based on daily use by the largest percentage of teachers were as follows: Elementary--Scoring High on the CTBS; Junior High--CTBS Classroom Management Guide; and Senior High--Scoring High on the CTBS.

Instructional Materials that were least useful on a daily basis by grade level based on no use or use by low percentages of teachers were as follows: Elementary--Wordly Wise and Systematic Teaching and Measuring Mathematics (STAMM); Junior High and Senior High--Systematic Teaching and Measuring Mathematics (STAMM).

Since the program was most effective with 10th grade, it appears that, Scoring High on the CTBS when used by 10th grade teachers was the most useful of the Instructional Materials.

## Recommendations

1. Guidelines for use (Daily, bi-weekly, weekly, etc.) of the specially developed Instructional Materials should be transmitted to each teacher.

2. Monitoring is needed to insure that all specially developed materials are used as stipulated.

3. A more in-depth evaluation is needed. Data should be collected by grade level in order to correlate specially developed Instructional Material use and CTBS gains by grade.

## INTRODUCTION

Emphasizing the area of test preparation and improvement for students in 25 low achieving schools, the Cumulative Deficits in Basic Skills Program commenced in October 1989, with funding from the District of Columbia Public Schools (DCPS), Chapter 2, LEA block grant. Participating in the program were six elementary schools, eleven junior high schools, and eight senior high schools. Low achievement was determined by using reading and mathematics scores from the 1988-1989 Comprehensive Test of Basic Skills (CTBS).

### Description of the Cumulative Deficits in Basic Skills Program

Stressing the area of test preparation and improvement for students in twenty-five elementary, junior high and senior high schools, the 1989-90 Cumulative Deficits in Basic Skills Program had the following primary objectives.

- To provide staff development training on effective test improvement activities;
- To provide instructional support in reading and mathematics; and
- To provide instructional materials to improve students' scores on the CTBS reading and mathematics test.

A staff training program was developed for each school. Training assisted staff in selected schools in implementing a test improvement program to increase reading and mathematics scores on the CTBS. Specially designed instructional materials were developed or purchased for school use.

The first program year was the period October 1989 through May 10, 1990.

## STATEMENT OF THE PROBLEM

To determine the impact of the Cumulative Deficits Program on student achievement, data and information were collected to answer the question:

> What is the impact of the 1989-90 Cumulative Deficits in Basic Skills Program on student performance on the CTBS reading and mathematics tests?

The following evaluation questions were developed to assist in assessing program impact.

## EVALUATION QUESTIONS

I. Did significant CTBS Normal Curve Equivalent (NCE) reading and mathematics gains occur from pretest (May 1989) to posttest (May 1990) for students participating in the Cumulative Deficits in Basic Skills Program?

II. Did the 25 low achieving schools find the specially developed instructional materials useful?

## METHODOLOGY

CTBS NCE scores in reading and mathematics were collected for all students in grades 3, 6, 8, 9, and 10 as of May 1989, (pretest). May 1990 NCE scores were collected for all students in the sample who took the CTBS (posttest). CTBS NCE scores, from the following subtests were analyzed: Reading Vocabulary; Reading Comprehension; Total Reading; Mathematics Concepts/Applications; Mathematics Computations and Total Mathematics.

Table 1 indicates the twenty-five (25) schools participating in the Cumalative Deficits in Basic Skills Program from October 1989 through May 1990.

TABLE 1

SCHOOLS PARTICIPATING IN THE CUMALATIVE DEFICITS IN BASIC SKILLS PROGRAM

| Elem. Sch. | Jun. Hi. Sch. | Sen. Hi. Sch. |
|---|---|---|
| Bryan | Evans | Anacostia |
| Drew | Flet. John. | Cardozo |
| Carver | Friendship* | Ballou |
| Emery | Garn.-Patter. | Eastern |
| Lud.-Taylor | Hart | McKinley |
| Tyler | Johnson | Roosevelt |
| | Kramer | Spingarn |
| | Lincoln | Woodson, H.D. |
| | Roper | |
| | Terrell | |
| | Woodson, C.G. | |

*Renamed Patricia Roberts Harris E.C.

The Service Delivery Model Student Achievement/Test Improvement Survey, Part II, developed by the Division of Instructional Support and Professional Development and Training and the Research and Evaluation Branch was used to collect data on the utilization of the specially designed instructional materials.

Data Analysis

Correlated t-tests analyses, with the significance level set at .05 alpha level, were performed to measure mean reading and mathematics Normal Curve Equivalent (NCE) gains on the CTBS from pretest (May 1989) to posttest (May 1990) for matched samples of students particiating in the Cumulative Deficits in Basic Skills Program in grades 3, 6, 8, 9, and 10. Descriptive statistics were generated on the survey instrument.

## FINDINGS

This section will present statistical analyses of CTBS NCE gains from pretest (May 1989) to postest (May 1990) for reading and mathematics by grade level and also descriptive statistics from the survey. Findings will be presented by evaluation question.

### Comprehensive Test of Basic Skills Performance

I. Did significant CTBS Normal Curve Equivalent(NCE) reading and mathematics gains occur from pretest (May 1989) to posttest (May 1990) for students participating in the Cumulative Deficits in Basic Skills Program?

Third Grade Performance Cn The CTBS. From pretest to posttest, third grade student mean NCE performance in reading indicated that no significant gains or losses ocurred in Reading Vocabulary, Reading Comprehension, and Total Reading (See Table 2). Third grade student mean performance in mathematics from pretest to posttest resulted in a significant gain for Math Computation, a mean increase from 41.70 NCE to 48.06 NCE (See Table 2). No significant gains occurred in Math Concepts/Applications or in Math Total scores.

TABLE 2

GRADE 3 PERFORMANCE ON THE CTBS FOR
STUDENTS MATCHED ON THE PRE AND POSTTESTS@

| | 1989 NCE SCORES (PRETEST) GR.3 | 1990 NCE SCORES (POSTTEST) GR. 4 | GAIN |
|---|---|---|---|
| READING | | | |
| Read. Voc. | 37.42 | 35.86 | -1.57 |
| Read. Comp. | 36.47 | 38.21 | +1.74 |
| Read. Tot. | 36.47 | 37.02 | + .55 |
| MATHEMATICS | | | |
| Math Comp. | 41.70 | 48.06 | +6.35* |
| Math Con./ Appl. | 41.22 | 42.00 | + .78 |
| Math Tot. | 40.81 | 43.61 | +2.80 |

* $p<.01$ @ n=125

Sixth Grade Performance On The CTBS. From pretest to posttest, sixth grade mean student performance declined significantly in Reading Vocabulary and in Reading Total scores (See Table 3). Reading Vocabulary performance decreased from 46.51 NCEs to 41.62 NCEs. Reading Total decreased from 46.65 to 43.31. Reading Comprehension scores declined but not significantly. Sixth grade mean performance in mathematics revealed significant decline from pretest to posttest in two of these areas. Mean Math Computation NCEs decreased significantly from 52.39 to 45.42. Mean Math Total NCEs decreased from 52.03 to 48.37. Mean Math Concept/Application NCEs increased significantly from 48.67 to 51.29.

TABLE 3

GRADE 6 PERFORMANCE ON THE CTBS FOR
STUDENTS MATCHED ON THE PRE AND POSTTESTS@

| 1989 CTBS NCE SCORES (PRETEST) GR. 6 | 1990 CTBS NCE SCORES (POSTTEST) GR. 7 | |
|---|---|---|
| READING | | GAIN |
| Read. Voc. 46.51 | 41.62 | -4.89* |
| Read. Comp 46.24 | 44.63 | -1.61 |
| Read. Tot. 46.65 | 43.31 | -3.34* |
| MATHEMATICS | | |
| Math Comp. 52.39 | 45.42 | -6.97* |
| Math Con./ Appl. 48.67 | 51.29 | +2.62** |
| Math Tot. 52.03 | 48.37 | -3.65* |

*p<.01
**p <.05
@n ranged from 103 to 108

Eighth Grade Performance On The CTBS. From pretest to posttest eighth grade mean NCE performance in Reading indicated that significant changes occurred (See Table 4). Reading Vocabulary increased significantly from 39.00 to 41.33 . Reading Comprehension decreased significantly from 41.52 to 37.44 and Reading total decreased significantly from 40.46 to 39.53. Eighth grade mean performance in mathematics from pretest to posttest resulted in a significant decrease in Mathematics Computation and in Mathematics Concepts/Applications from 46.89 NCE to 45.36 and 45.70 to 42.11 NCEs, respectively (See Table 4). There were no significant gains in eight grade Math Totals.

TABLE 4

GRADE 8 PERFORMANCE ON CTBS FOR
STUDENTS MATCHED ON THE PRE AND POSTTESTS@

| 1989 NCE SCORES (PRETEST) GRADE 8 | | 1990 NCE SCORES (POSTTEST) GRADE 9 | GAIN |
|---|---|---|---|
| | READING | | |
| Read. Voc. | 39.00 | 41.33 | +2.33* |
| Read. Comp. | 41.52 | 37.44 | -4.08* |
| Read. Tot. | 40.46 | 39.53 | - .93** |
| | MATHEMATICS | | |
| Math Comp. | 46.89 | 45.36 | -1.53* |
| Math Con./ Appl. | 45.70 | 42.11 | -3.58* |
| Math Tot. | 45.71 | 45.02 | -0.69 |

*p <.01
**p <.05
@n ranged from 690 to 724

Ninth Grade Performance On The CTBS.. From pretest to posttest, ninth grade mean NCE student performance indicated that significant performance declines occurred in mathematics and reading (See Table 5). Reading Vocabulary, Reading Comprehension and Reading Total NCEs decreased significantly from 41.45 to 34.43, 37.97 to 34.01, 39.79 to 34.62, respectively. Mathematics Computation, Mathematics Concept/Application and Mathematics Total NCEs decreased significantly from 46.52 to 42.49, 42.66 to 37.55, 42.63 to 41.15, respectively.

TABLE 5

GRADE 9 PERFORMANCE ON THE CTBS FOR
STUDENTS MATCHED ON PRE AND POSTTESTS@

| | 1989 CTBS NCE SCORES (PRETEST) GR. 9 | 1990 CTBS NCE SCORES (POSTTEST) GR. 10 | GAIN |
|---|---|---|---|
| READING | | | |
| Read. Voc. | 41.45 | 34.43 | -7.02* |
| Read. Com. | 37.97 | 34.01 | -3.96* |
| Read. Tot. | 39.79 | 34.62 | -5.17* |
| MATHEMATICS | | | |
| Math Com. | 46.52 | 42.49 | -4.03* |
| Math Con./ Appl. | 42.66 | 37.55 | -5.11* |
| Math Tot. | 41.15 | 41.15 | -5.08* |

*<.01 @n ranged from 683 to 691

Tenth Grade Performance On The CTBS. From pretest to posttest, significant performance gains occurred in mean 10th grade CTBS reading achievement (See Table 6). Reading Vocabulary, Reading Comprehension, and Reading Total mean NCE Scores increased significantly from 39.58 to 40.46, 40.02 to 44.14 and 40.28 to 42.82, respectively. Math Computation scores increased significantly from 44.82 to 46.30 NCEs. Math Concept/Application NCE means decreased significantly from 44.15 to 41.89. Math Total NCE means did not change significantly.

TABLE 6

GRADE 10 PERFORMANCE ON THE CTBS FOR STUDENTS MATCHED ON PRE AND POSTTESTS@

| | 1989 CTBS NCE SCORES (PRETEST) GRADE 10 | 1990 CTBS NCE SCORES (POSTTEST) GRADE 11 | GAIN |
|---|---|---|---|
| READING | | | |
| Read. Voc. | 39.58 | 40.46 | + .88* |
| Read. Com. | 40.02 | 44.14 | +4.11* |
| Read Tot. | 40.28 | 42.82 | +2.54* |
| MATHEMATICS | | | |
| Math Com. | 44.82 | 46.30 | +1.48* |
| Math Con./ Appl. | 44.15 | 41.89 | -2.26* |
| Math Tot. | 44.12 | 43.92 | - .20 |

*p <.01 @n ranged from 1219 to 1240

Usefulness of Specially Developed and Purchased Instructional Materials

II. Did the 25 low achieving schools find the specially developed instructional materials useful?

The percentage of elementary teachers utilizing on a daily basis the specially developed and purchased instructional materials listed in Table 7 ranged from a low of 6.67%, for Building Power in Reading and Math, to a high of 87.50%, for Scoring High on the CTBS. Teachers who never used these materials ranged from a low of 3.13%, for Scoring High on the CTBS, to a high of 66.67% for Building Power in Reading and Math, 90% for Wordly Wise and 100% for STAMM.

TABLE 7

NUMBER AND PERCENTAGE OF ELEMENTARY TEACHERS WHO REPORTED USING THE SPECIALLY DEVELOPED INSTRUCTIONAL MATERIALS DAILY, WEEKLY, AND NEVER

| INSTR. MATER. | DAILY # | DAILY % | WEEKLY # | WEEKLY % | NEVER # | NEVER % |
|---|---|---|---|---|---|---|
| Scoring High on the CTBS (n=32) | 28 | 87.50% | 3 | 09.38% | 1 | 03.13% |
| Wordly Wise (n=10) | 1 | 10.00% | | | 9 | 90.00% |
| Build. Power in Rdg. & Math (n=15) | 1 | 06.67% | 4 | 26.67% | 10 | 66.67% |
| STAMM* (n=9) | | | | | 9 | 100.00% |
| CTBS Lrng. Mat. Kit (n=25) | 17 | 68.00% | 7 | 28.00% | 1 | 04.00% |
| CtBS Clsrm. Mangmt. Guide (n=25) | 16 | 64.00% | 8 | 32.00% | 1 | 04.00% |
| Icebreakers (n=22) | 12 | 54.50% | 7 | 31.80% | 3 | 13.60% |
| Others (n=9) | 8 | 88.80% | 1 | 11.10% | | |

* STAMM=Systematic Teaching and Measuring Mathematics

The percentage of Junior High School teachers utilizing on a daily basis the specially developed and purchased instructional materials listed in Table 8 ranged from a low of 30.00%, for Systematic Teaching and Measuring Mathematics (STAMM), to a high of 53.40%, for the CTBS Classroom Management Guide. Table 8 indicates that the percentage of Junior High School teachers using these materials on a weekly basis ranged from a low of 11.00%, for STAMM, to a high of 29.70, for Icebreakers. The percentage of teachers who never used these materials (See Table 8) ranged from a low of 10.80%, for Icebreakers, to a high of 50.00%, for STAMM.

TABLE 8

NUMBER AND PERCENTAGE OF JUNIOR HIGH SCHOOL TEACHERS WHO REPORTED USING THE SPECIALLY DEVELOPED INSTRUCTIONAL MATERIAL DAILY, WEEKLY, BI-WEEKLY AND NEVER

| INSTR. MATER. | DAILY # | % | WKLY. # | % | BI-WKLY. # | % | NEVER # | % | OTHER # | % |
|---|---|---|---|---|---|---|---|---|---|---|
| Scoring High on the CTBS (n=121) | 56 | 46.67% | 30 | 25.00% | 10 | 08.33% | 22 | 18.33% | 3 | 02.49% |
| Wordly Wise (n=100) | 41 | 41.41% | 24 | 24.24% | 4 | 04.04% | 29 | 29.29% | 2 | 02.02% |
| Build Power in Rdg. & Math (n=94) | 30 | 31.91% | 17 | 18.09% | 7 | 07.45% | 38 | 40.43% | 2 | 02.12% |
| Vocab. for the H.S.Std. (n=80) | 25 | 31.25% | 11 | 13.75% | 4 | 05.00% | 38 | 47.50% | 2 | 02.50% |
| STAMM* n=80 | 24 | 30.00% | 9 | 11.00% | 5 | 06.20% | 40 | 50.00% | 2 | 02.40% |
| CTBS Lrng. Mat. Kit n=95 | 49 | 51.50% | 24 | 25.20% | 4 | 04.20% | 16 | 16.80% | 2 | 02.00% |
| CTBS Clsrm. Mngmt. Guide n=116 | 62 | 53.40% | 26 | 22.40% | 3 | 02.50% | 3 | 19.80% | 2 | 01.60% |
| Ice Breakers n=138 | 71 | 51.40% | 41 | 29.70% | 7 | 05.00% | 5 | 10.80% | 4 | 02.80% |
| Others n=20 | 11 | 55.00% | 5 | 25.00% | | | 2 | 10.00% | 2 | 10.00% |

*STAMM=Systematic Teaching and Measuring Mathematics

Senior High School teachers who revealed that they used the specially developed Instructional Materials on a daily basis ranged from a low of 46.20%, for STAMM, to a high of 69.74%, for Scoring High on the CTBS (See Table 9). The percentage of teachers who used these materials on a weekly basis ranged from a low of 18.42%, for Scoring High on the CTBS, to a high of 31.40%, for Vocabulary for the High School Student (See Table 9).
Senior High School teachers who never used any of these materials ranged from a low of 6.58%, for Scoring High on the CTBS, to a high of 27.70%, for STAMM (See Table 9).

TABLE 9
NUMBER AND PERCENTAGE OF SENIOR HIGH SCHOOL TEACHERS WHO REPORTED USING THE SPECIALLY DEVELOPED INSTRUCTIONAL MATERIALS DAILY, WEEKLY, BI-WEEKLY AND NEVER

| INSTR. MATER. | DAILY # | % | WKLY. # | % | BI-WKLY. # | % | NEVER # | % | OTHER # | % |
|---|---|---|---|---|---|---|---|---|---|---|
| Scoring High on the CTBS n=76 | 53 | 69.74% | 14 | 18.42% | 4 | 05.26% | 5 | 06.58% | | |
| Wordly Wise n=62 | 35 | 56.45% | 13 | 20.97 | 1 | 01.61 | 12 | 19.36% | 1 | 01.61% |
| Build. Power in Read. % Math n=58 | 28 | 48.28% | 15 | 25.86% | 4 | 06.90 | 11 | 18.97% | | |
| Vocab. for the H.S.Std. n=86 | 46 | 53.49% | 27 | 31.40% | 4 | 04.65% | 9 | 10.47% | | |
| STAMM* n=54 | 25 | 46.20% | 12 | 22.20% | 2 | 03.70% | 15 | 27.70% | | |
| CTBS Lrng. Mat. Kit. n=85 | 45 | 52.90% | 26 | 30.50% | 5 | 05.80% | 8 | 09.40% | 1 | 01.1% |
| CTBS Clsrm. Mngmt. Guide n=79 | 48 | 60.70% | 20 | 25.30% | 1 | 01.20% | 10 | 12.60% | | |
| Ice Breakers n=101 | 54 | 53.40% | 30 | 29.70% | 7 | 06.90% | 10 | 09.90% | | |
| Others n=14 | 6 | 37.50% | 2 | 12.50% | 1 | 06.20% | 5 | 31.20% | | |

*STAMM=Systematic Teaching and Measuring Mathematics

## CONCLUSION

### Comprehensive Test of Basic Skills Gains

One of the goals of this study was to determine if significant TBS gains occurred from pretest (May 1989 ) to posttest (May 1990) for students participating in the Cumulative Deficits in Basic Skills Program (CDBSP). Results from the Comprehensive Test of Basic Skills indicated that tenth grade students of this sample benefited most from the Cumulative Deficits in Basic Skills Program. Grade 10 students had significant performance gains in 4 of six areas, specifically, Reading Vocabulary, Reading Comprehension, Reading Total, and Mathematics Computation. Thus, the program was most effective with the 10th grade.

The CDBS was not effective with 9th grade, 8th grade and 6th grade students matched in this sample. Ninth grade students had significant performance declines in all 6 areas. Sixth and eighth grade students had significant performance declines in 4 out of 6 area. Areas of performance decline for 6th grade and 8th grade, respectively, were as follows:

- Sixth- Reading Vocabulary, Reading Total, Math Computation, Math Total; and
- Eighth-Reading Comprehension, Reading Total, Math Computations, Math Concept/Application.

Significant gains for grades 6 and 8, respectively, occurred in only one area Math/Concept Application and Reading Vocabulary.

Grade 3 performance did not change significantly in 5 areas out of 6. Significant performance gains occurred in one area Math Computation.

### Specially Developed and Purchased Instructional Materials

Instructional materials by grade level that were most useful based on daily use by the largest percentage of teachers were as follows: Elementary--Scoring High on the CTBS; Junior High--CTBS Classroom Management Guide; and Senior High--Scoring High on the CTBS.

Instructional Materials that were least useful on a daily basis by grade level based on no use or use by low percentages of teachers were as follows: Elementary--Wordly Wise and Systematic Teaching and Measuring Mathematics (STAMM); Junior High and Senior High--Systematic Teaching and Measuring Mathematics (STAMM).

Since the program was most effective with 10th grade, it appears that, Scoring High on the CTBS when used by 10th grade teachers was the most useful of the instructional materials.

## RECOMMENDATIONS

1. Guidelines for use (Daily, bi-weekly, weekly, etc.) of the specially developed instructional materials should be transmitted to each teacher.

2. Monitoring is needed to insure that all specially developed materials are used as stipulated.

3. A more in-depth evaluation is needed. Data should be collected by grade level in order to correlate specially developed instructional material use and CTBS gains by grade.